Cost-effectiveness and classification

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This week the global health cynosure has been the World Health Assembly (WHA) in Geneva. On the agenda we've seen action plans galore: from tuberculosis control to disability to neonatal health. There have been follow-up reports on vaccination, non-communicable diseases, and nutrition. But one thing that hasn't so far made it onto a WHA agenda is surgery. Conservative estimates dating back to 2006 put the global burden of surgically treatable disorders at 11%, and many such conditions—eg, road-traffic injuries and cancer—are rising. Why the neglect?

WHO established the Global Initiative for Emergency and Essential Surgical Care in 2005 with the aim of engendering collaboration between "health professionals, professional societies, academic institutions, non-governmental organisations, and health authorities interested in improving surgical care in LMICs". The forum has met biennially since 2005, but strategic outputs have been difficult to identify. Similarly, the 2008 World Health Report recognised surgery as an essential spoke in the health-system wheel, with primary care as the hub. Yet calls made back in 2010 for a "World Health Assembly amendment confirming the critical role of emergency and essential surgery within the health system" have still not borne fruit.

The Lancet's forthcoming Commission on Global Surgery aims to push the agenda forward. One of its key aims is to identify barriers to universal access to safe, affordable, high-quality surgical care, and to clarify the role of all stakeholders in attaining this goal. As well as the Commission report, which is due early next year, a number of research papers will come out of the project, and *The Lancet Global Health* publishes one such paper this month.

Tiffany Chao and colleagues explore one of the potential barriers to the adequate provision of surgical care in low-income countries and to its visibility on the global health agenda—its supposed high cost. In their systematic review, Chao and colleagues assessed 26 previous studies of the cost-effectiveness of a range of essential surgical procedures across 24 countries. Standardised cost-effectiveness ratios were calculated in 2012 US dollars per disability-adjusted life-year (DALY) averted, and median values were found to be $13·78 for adult male circumcision; $47·74 for cleft lip and palate repair; $82·32 for general surgery; $108·74 for hydrocephalus repair; $136·00 for ophthalmic surgery (cataract, trichiasis, and trachoma); $315·12 for caesarean deliveries; and $381·15 for orthopaedic surgery. Rather than relying on these figures in isolation, or applying WHO's standard measures of what is "cost-effective" (one-to-three times greater than a country's gross domestic product [GDP] per head) and "very cost-effective" (less than a country's GDP per head), Chao and colleagues go a step further and compare these ratios against those for interventions with existing donor and government support—ie, vaccines of the Expanded Program on Immunization, bednets, BCG vaccinations, and HIV treatment. All the median values for the surgical procedures studied were well within the cost range of these accepted interventions, nicely showing that surgery is a valuable addition to the toolbox of global health policy and practice.

For **estimates of the global burden of surgical conditions** see http://www.who.int/surgery/SurgeryDebasworldbank.pdf?ua=1

Maternal deaths have also been in the headlines over recent weeks, with WHO and the Institute for Health Metrics and Evaluation (IHME) both releasing new estimates for 2013. While methods differed, and it is instructive to have these alternative measurements, the number of women estimated to have died in 2013 during pregnancy or shortly after childbirth were remarkably similar: 289 000 according to WHO and 293 000 according to IHME. The findings on *why* mothers die, however, were not so consistent. WHO's analysis of the causes of maternal death are published in *The Lancet Global Health* this month, and put indirect causes such as diabetes, malaria, HIV, and obesity on a par with haemorrhage as the major causes of maternal mortality (around 27% of deaths each), with hypertension (14%) and sepsis (11%) the next most important contributors. The IHME findings indicate that indirect causes only accounted for around 10% of deaths, with hypertension at 12% and sepsis 9%. Abortion and "other direct causes" accounted for the most deaths according to IHME (around 17% each), with haemorrhage at around 14%. The *Lancet Global Health* paper includes a useful panel that unpicks some of the common problems encountered when classifying cause of maternal death, which undoubtedly account for some of these differences. The main policy recommendation, then, is for data collection to be improved. Any death in pregnancy is a tragedy and ought to be recorded with the utmost care.

For the **2008 World Health Report** see http://www.who.int/whr/2008/whr08_en.pdf

For the call for a **WHA amendment on surgery** see *World J Surg* 2010 **34:** 386–90.

For the ***Lancet* Commission on Global Surgery** see http://www.thelancet.com/commissions/global-surgery

For the **WHO estimates of maternal mortality for 1990–2013** see http://www.who.int/reproductivehealth/publications/monitoring/maternal-mortality-2013/en/

For the **IHME estimates of maternal mortality for 1990–2013** see *Lancet* 2014; published online May 2. http://dx.doi.org/10.1016/S0140-6736(14)60696-6

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